Carnap's Paradox and Easy Ontology

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"If someone wants to speak in his language about a new kind of entities, he has to introduce a system of new ways of speaking...." ([Carnap(1950)], 21)

"[T]he positing of physical objects is far more archaic, being indeed coeval, I expect, with language itself." ([Quine(1951a)], 42)

Abstract

Being is said in more than one way, according to Aristotle. Insouciance about it is said in more than one way, too. We can distinguish at least the neo-Fregean approach, quantifier variance, postulationism, ontological maximalism, ontological relativity, Thomasson's easy ontology, and my quizzicalism.

The easy ontologist regards virtually all existence-questions as trivial; the answer is always *yes*. *There are tables*, for instance, is a logical consequence of lower-level empirical truths E and analytic truths A. A little more carefully, the truth, or perhaps assertability, of *There are tables* is logically guaranteed, given empirical truths E, by meaning-rules A—rules issuing from the meaning of "table." The quizzicalist holds, not of all existence-questions but a particular class of them, typified by *Are there numbers?*, that they are moot in the sense of objectively unanswerable.

A lot of people on this list, including Thomasson and myself, draws inspiration from Carnap, so we'll spend some time looking at him, in particular at a paradoxical-looking inference pattern that he identifies. It goes from an innocent-looking premise α, to an ontologically loaded conclusion ω. Thomasson and I agree that the inference is valid; α does entail ω. She thinks we read too much into ω; properly understood, it follows from α. I think it looks problematic because we read less into α than some might want; what it *seems* to say does not imply ω.

1 Valid, yet ampliative

If one statement or claim implies another, and the first is clearly, uncontroversially, true, one would expect the second to be clearly, uncontroversially, true too. Controversy should not erupt between the premises and the conclusion of a valid argument. But it does, indeed in more than one way. The first, which mainly exercises epistemologists, is illustrated by examples like

I have a hand. I am not a bodiless BIV. (Nozick)
That is a zebra. It is not a cleverly disguised mule. (Dretske)
I turned the stove off. Evidence that I didn't is thus misleading. (Kripke)
It is 3am (says my watch). My watch is accurate iff it reads 3am. (Cohen)

I am teaching logic next year. So, I won't die in the meantime. (Vogel)[1]

The trouble with these, I think, is that the second statement says more than the first, not by *demanding* more of the world (it demands less), but by focussing its demands on *more of the world*—in other words by being *about* more of the world. Why the introduction of new subject matter should make the conclusion harder to know is a good question, but not for a symposium on ontological disagreement.[2]

The second, more ontologically interesting, way a validly drawn conclusion can court new controversy is as follows. Let F be a kind of thing such that there are clearly no things of that kind: the kind *dragon*, say, or *married bachelor*, or *even prime number over ten*. Suppose we are asked about the number of Fs: is it 5, or 55, or 1001, or what? None of these, of course. The number of Fs is 0. But now, from the fact that the number of Fs is 0, it follows by logic that there is such a thing as the number of Fs, and hence that there are numbers. Whether there are numbers, however, is considered by many a highly controversial matter.

Note, there is no obvious change in subject matter here, as we get with *I turned the stove off* and *Evidence to the contrary is misleading*. Issues about the misleadingness of evidence are not "already there" in *I turned the stove off*. Issues about numbers *do* seem to be already there in *The number of Fs = 0*. How can a controversial claim follow by logic from a clearly true one, when the inference is not ampliative even on the score of subject matter?

2 Carnap's paradox

This is what I am calling Carnap's Paradox ([Carnap(1950)]). It is not essential to the paradox that there be NO things of kind F. The number of Martian moons is 2; this again is agreed all around. It follows by logic that there is such a thing as the number of Martian moons, hence that there are numbers. It is not essential, either, that we start from a premise about how many Fs there are. A numerical comparison would do it, e.g., *A hive's worker bees outnumber its drones by a factor of approximately* $(1+\sqrt{7})/2$. Carnap himself starts from the fact that there are prime numbers larger than 1,000,000. That the primes do not give out before 1,000,000 has been known since Euclid, yet it implies something that is not clear at all, namely, that numbers exist in the first place. Indeed F does not have to be the category of numbers: it could be shapes, or properties, or propositions, etc. Let's stick with numbers for the time being, for the precise breadth of the paradox is one of the points at issue.

Here is the problem stated a bit more generally. Let α be a "specific" claim that assumes entities of a given type. Let ω be a general claim that there *are* entities of that type—if the entities stand or fall together, like the numbers, it can say that there are *the* numbers, there is the number *system*. The following three propositions look highly plausible:

α entails ω.
α is clearly true.
Whether ω holds is relatively controversial—moreso than whether α holds.

But, assuming anyway that uncontroversiality is preserved under (obvious) entailment, the three propositions cannot be true together. Something has got to give.

[1] [Nozick(1981)]. [**?**], [Dretske(1971)], [Cohen(2002)], [Vogel(1987)]
[2] See [Yablo(2014)] and [Yablo(201?)].

I want to consider two main lines of response. Both see the inference from α to ω as valid. They differ, though, on why ω seem more controversial than α. The standard response, discussed immediately below, postulates a confusion between two ways, or putative ways, of understanding ω, one plain and the other metaphysical. The plain reading is entailed by α, but is not controversial; the loaded one is controversial, but not entailed by α. The innocent reading is the right one. This strategy thus rejects the third statement: ω is uncontroversially correct. A different strategy, left for later, postulates a confusion between two readings of α. The innocent reading, though not controversial, fails to entail ω; the loaded reading entails ω, but is controversial. This strategy, which we get to later, rejects in effect the second statement: α is no less controversial than ω.

3 Carnap's solution

When we run through the Carnapian argument in our heads—*The number of Fs = 0*, therefore, *There is such a thing as the number of Fs*, therefore *Numbers exist*—something changes—some cognitive switch is pulled—en route from α to ω, in a way that bears on our judgments of clear vs controversial. When we say, publicly or to ourselves, that *The number of Fs = 0*, we feel ourselves to be addressing one sort of question; let's following Carnap call it an internal question. But when we get to *Numbers exist*, or *The number system exists*, we are suddenly addressing another sort of question; again following Carnap, an external question.

This is not yet a solution, for we have no idea as yet what sets the two kinds of question apart, or why one sort of question should seem so much more controversial than the other. What we have now the outline of a solution. To fill it in, we need to say

(INT) what an internal question is,
(EXT) what an external question is,
(EAR) why α is heard as addressing an internal question and ω isn't,
(CON) why the external question is not straightforward

Carnap as we know has a proposal about much of this. Given that he never, so far as I know, portrays (1)-(3) as a *paradox*, it is a bit of a stretch to speak of Carnap's solution to it. Let me do so anyway, on the understanding that this means a solution cobbled together out of Carnapian materials.[3] Carnap's solution as I read it is pretty close to what the easy ontologist says, so we will be developing at the same time our understanding of easy ontology.

Claims about ontologically controversial objects are not singled out for special treatment by Carnap. He asks only that they meet a standard to which all meaningful talk is, or ought to be, subject: an appropriate sort of discipline or rule-governedness. Run through his formal theory of language, this comes to the requirement that meaningful discussion of Xs—material objects, numbers, properties, spacetime points, or whatever—has got to proceed under the auspices of a linguistic framework, which lays down the "rules for forming statements [about Xs] and for testing, accepting, or rejecting them." The acceptance rules may be regarded as inference rules of the form $P \therefore C$, where P is a protocol sentence—originally, a sense report—-and C is something more theoretical which is stipulated to follow from it.[4] A sample rule of the material object framework might be[5]

[3]The next section borrows extensively from [Yablo(1998)].
[4]Hypothetico-deductive alternative.
[5]Alternatively we could treat the rules as conditionals with protocol sentences in the antecedent.

Paerticles are (or appear to be) arranged thusly here
∴ There is a table here

A rule of the number framework might be

There are more chairs here than tables
∴ The number of chairs here exceeds the number of tables

A speaker who respects the requirement of asserting just what the rules allow is said by Carnap to be addressing an internal question. That is his answer to (INT). An internal question is a question to be resolved by the framework rules for discussion of Xs—in the case of natural numbers, the rules of pure and applied arithmetic.

A good though not foolproof way to recognize internal questions is that they tend to concern, not the Xs as a class, but the Xs meeting some further condition: "is there a piece of paper on my desk?" rather than "are there material objects?"[6] One *could* ask in an internal vein about the Xs generally; (1) are there numbers and material objects or not? One *could* ask in an external vein about the existence of Xs of a particular sort; (2) is there *really* a thing that numbers the Martian moons?

One could, but one probably wouldn't. Question 2. is unlikely because it suggests a special interest in the reality of some numbers as opposed to others, when, as we have noted, the whole lot stand or fall together. Asking whether the number of *Martian* moons really (number framework aside) exists would be like asking whether *Jeremy* really (basketball game aside) scores two points when he throws the ball through the hoop.

Question 1. is unlikely too, because for any framework of interest, the answer is certain to be "yes." What use would the X-framework be if having adopted it, you found yourself with no Xs to talk about? We are unlikely to be addressing an internal question when we say that Xs exist, because so understood our remark would be silly. *Obviously* the framework instructs us to say there are Xs, and speakers generally try to avoid stating the obvious. In the number case this comes through particularly clearly:

> This statement [our ω] follows from the analytic statement "five is a number" and is therefore itself analytic. Moreover, it is rather trivial (in contradistinction to a statement like "There is a prime number greater than a million" which is likewise analytic but far from trivial), because it does not say more than that the new system is not empty... Therefore nobody who meant the question "Are there numbers?" in the internal sense would either assert or even seriously consider a negative answer. This makes it plausible to assume that those philosophers who treat the question of the existence of numbers as a serious philosophical problem, and offer lengthy arguments on either side, do not have in mind the internal question ([Carnap(1950)]).

Numbers exist heard as an internal claim would be an analytic triviality, and hence a ridiculous thing to say. Hence we should try to hear it another way. (This is Carnap's answer to (EAR).)

What other way? The point about internal existence-questions is that they raise no difficulties of principle. It is just a matter of whether applicable rules authorize you to say that there are Xs of some particular kind. If they do, the answer is yes; otherwise no; end of story. The properly

[6]This is the distinction between category and subclass questions. [Quine(1951b)] confusingly presents it as at the heart of Carnap's concerns.

trained ontologist will of course find this unsatisfying. A system of rules making "There are material objects" or "There are numbers" *unproblematically* assertible is a system of rules in need of external validation, or the opposite. Are the rules right to counsel acceptance of "There are Xs"? It is no good consulting the framework for the answer; we know what *it* says. No, the existence of Xs will have to queried from a position outside the X-framework.

Now, Carnap does not entirely reject this line of thought. He respects the ambition to cast judgment on the framework from without. He just thinks we have a wrong idea of what is coherently possible here. How can an external deployment of "There are Xs" mean anything, when by definition it floats free of the rules from which meaning comes? Charity thus requires us to substitute a different question. There are, fortunately, meaningful questions in the vicinity. These are questions that mention "X" rather than using it. One is the practical question: should we adopt a framework requiring us to use like so? This is Carnap's candidate for the role of the external question; this is his answer to (EXT). His answer to (CON) is unclear to me; more on this later.

4 Hermeneutic vs revolutionary Carnapianism

A prima facie oddity of Carnap's account is that, while it rests on empirical-looking claims about meaning and understanding, not much is given in the way of evidence for these claims. How is the apparatus of frameworks supposed to hook up with existence-questions as they arise naturally and unsupervised? Following Burgess on nominalism, we can distinguish a *hermeneutic* project, which sees in frameworks a good model of actual linguistic practice, and a *revolutionary* project, which recommends them as a way of *improving* the practice.

Most of the time he seems *not* to be thinking in hermeneutic terms. Philosophers cannot have in mind the internal question, he thinks, since nobody who meant the question "are there numbers?" would either assert or seriously consider a negative answer" (25). But what is the alternative? They of course *claim* to have in mind a non-internal question, but that just means we are going to have to part company with then, since "they have not succeeded in giving to the external question and to the possible answers any cognitive content" (25). Existence-talk is confused, Carnap seems to be saying, and not amenable to a definite interpretation. But we can un-confuse it so as to give everyone, even the self-styled nominalist, the right to talk platonistically. It's simply a matter of learning and respecting the "rules for introducing a new type of entity." That these rules are available, even if not so far actually followed, shows that

> using a language [referring to abstract entities] does not imply embracing a Platonic ontology but is perfectly compatible with empiricism and strictly scientific thinking. ...It is hoped that the clarification of the issue will be useful to those who would like to accept abstract entities in their work in mathematics, physics, semantics, or any other field; it may help them to overcome nominalistic scruples ([Carnap(1950)], 21))

So far, so prescriptive. Yet hermeneutic elements creep in too, from time to time. The theory of frameworks can help us to "understand" the problems that have traditionally concerned ontologists.

> Are there properties, classes, numbers, propositions? In order to understand more clearly the nature of these and related problems, it is above all necessary to recognize

> a fundamental distinction between two kinds of questions concerning the existence or reality of entities ([Carnap(1950)], 21)

Now, "Are there properties?" is a question of English, not an artificial language devised by Carnap. One might expect a "distinction it is necessary to recognize" to understand a natural language question to be a natural language distinction. But internal is not a natural language category. Internal questions are meant to be answerable by algorithmic evaluation procedures, and that is just not we handle things in English:

> evaluation [of existence-claims] is usually carried out...as a matter of habit rather than a deliberate, rational procedure. ([Carnap(1950)], 22)

This is puzzling. A distinction involving algorithmic evaluation rules does not seem like it would map neatly onto a language where evaluation is instead habitual. If the distinction doesn't *apply* to the English question, how is it supposed to help us *understand* that question? Carnap does have something too say about this but I am not sure I follow it. Framework rules are not there to begin with; they are what you get when those habitual procedures are suitably cleaned up:

> ... it is possible, in a rational reconstruction, to lay down explicit rules of evaluation. This is one of the main tasks of a pure, as opposed to a psychological, epistemology ([Carnap(1950)], 22)

It can hardly fail to be possible in *some* sense of word to lay down explicit evaluation rules. One might wonder, though, how the possibility of a reconstructed alternative $\mathcal{Q}$ is supposed to influence our thinking about regular old existence questions like Q = "Are there numbers?" Just to call the reconstruction *rational* does not do much to clarify the matter. Suppose, as some maintain, that scientific theorizing can be rationally reconstructed along Bayesian lines. Does deductive knowledge become a pseudo-problem, because the Bayesian has no room in her system for logical ignorance? Clearly not. No more does it make the existence of numbers a pseudo-problem, that a Carnapian reconstruction does away with ontological ignorance.[7]

Is this to say it is automatically problematic if framework rules pertain to a rational reconstruction of ontological inquiry, rather than the real thing? Not at all. It depends on the kinds of lesson one is proposing to draw. If the lesson is practical—let us henceforth construe existence-questions so as to be answerable by appeal to uncontroversial rules—then a case might well be made for this based on properties of the reconstruction. If the lesson is factual—existence-questions *are*, as a matter of meaning, resolvable by appeal to uncontroversial rules— that is another matter. Carnap himself may have had the practical lesson in mind. The question for us, though, concerns actual existence-question; are *they* easily resolvable? Carnap does *hint* at a way of getting the rational reconstruction to bear on actual existence-questions. This is discussed and found wanting in the next section. Then we move on to neo-Carnap, who (we stipulate) wants to show that ontology *is* easy, not that it could and should be made so. Neo-Carnap has, of course, a great deal in common with Thomasson, the easy ontologist; ultimately though I will be suggesting that she is forced to veer back toward Carnap in an unexpected way. First, though, Carnap's attempt to be hermeneutic.

[7] Carnap *believes* that the existence of numbers is a pseudo-problem. But not for reasons anyone would find convincing today. "For Carnap,...the [epistemological] enterprise begins with the thought that there is a genuine dispute among truly rational investigators—as opposed to one form or another of verbal quibble—only if there is, antecedent to the resolution of the dispute, agreement as to the investigatory results—the experimental outcomes or computations, for example—that would resolve it. Looking at matters in this way suggests that no sense can be made of rational inquiry outside of a context that makes such agreement possible" ([Ricketts(1982)], 118). This is not quite verificationism—Carnap is not proposing a fixed class of protocol sentences to which all meaningful statements are answerable—but it comes close.

5 Implicit acceptance

Is the relation Carnap envisages between existence-questions as they arise in the wild, and the proposed reconstruction in terms of frameworks, tight enough to license the conclusions that some have wanted to draw, for instance, that if two individuals disagree about the existence of tables despite agreeing on lower-level facts, the disagreement is conceptual, not substantive? He admits that there is "no deliberate choice [of speaking the thing-language], because we all have accepted [it] early in our lives as a matter of course." It may be wondered, once again, how rules we never agreed to, and may not even understand, can bear on the interpretation of questions we do agree with and do understand? He answers that the rules are as *though* chosen:

> we may regard it as a matter of decision in this sense: we are free to choose to continue using the thing language or not; in the latter case we could restrict ourselves to a language of sense-data and other "phenomenal" entities, or construct an alternative to the customary thing language with another structure, or, finally, we could refrain from speaking ([Carnap(1950)], 23)

Our implicit allegiance to the thing-rules—to rules that premises about the sub-table order of things to conclusions about tables *as a matter of meaning*— is shown by our passing up other opportunities. We could have spoken a language of sense-data; we could have constructed "an alternative to the customary thing language with another structure"; we had and have the opportunity to stop speaking altogether.

Carnap seems to be thinking that we implicitly commit ourselves to taking premises about, say, sense-data, to analytically entail conclusions about tables, by not pursuing one of his stated alternatives. There would seem to be a few missing premises here. Neglecting the supposed alternatives commits us to the thing framework only if the alternatives really exist; we are well aware of them; they serve our purposes equally well; switching would not be difficult; it is the only way to avoid unwanted analytic commitment to tables

But Carnap gives no evidence that these premises are true, and they mostly seem false. There *is* no expressively adequate language of sense-data that we know of. That we had it open to us to construct other, non-sense-data-involving, alternatives to table and chair talk is pure allegation on his part—especially when we remember that the alternatives would have to be easily learnable and serve the same useful purposes. (I myself would not find it practical to stop talking and listening.)

The crucial point, however, is that the argument is basically circular. It is supposed to show that semantic rules are in effect right now that make it trivial that there are tables, given agreed-on premises. The evidence is that we are disinterested in alternatives that would get us off the ontological hook. But, why should we seek alternatives unless we are already *on* the hook?—which was the thing to be shown. You may as well argue that Americans implicitly commit themselves to attending church when they choose not to leave the country, since America is, as we know, a church-going country.

Carnap does not accuse the ontologically abstemious of outright hypocrisy, although he may seem to at one point. The physicist who espouses nominalism is apt to

> speak about ... functions, limits, etc, like anybody else, but with an uneasy conscience, like a man who in his everyday life does with qualms many things which are not in accord with the high moral principles he professes on Sundays ([Carnap(1950)], 21)

Is the physicist's position being described here as indefensible? I don't think so. Words like "qualms" and "uneasy conscience" suggest a *concern* about betraying one's own principles. Which makes sense; the physicist *hopes* he is able to get away with it, but the matter is somewhat confusing and he's no sure how the trick is done. If we are looking for a philosopher who charges this kind opt physicist with hypocrisy, a better bet would be Putnam.

> quantification over mathematical entities is indispensable for science, both formal and physical; therefore we should accept such quantification; but this commits us to accepting the existence of the mathematical entitites in question. This type of argument stems, of course, from Quine, who has for years stressed both the indispensability of quantification over mathematical entities and the intellectual dishonesty of denying the existence of what one daily presupposes. ([Putnam(1971)], 347)

Carnap hopes to "clarify this controversial issue" (21)—Platonism vs nominalism—which seems a far cry from accusing one side of dishonesty . Let's use neo-Carnapianism—imagine the "e" and "o" highlighted—for the easy ontologist's way of developing Carnap's view, on which the nominalist is not just in an uncomfortable position but a self-undermining one.

6 N*eo*-Carnapianism

If the hermeneutic reading of Carnap's project doesn't fit, then the easy ontologist, in holding that the *actual* meaning of "table" imposes an obligation to accept the existence of tables, is being more Carnapian than Carnap. Speakers must *actually* be subject to meaning rules given which "Do tables exist?" has, given unproblematic empirical premises, an analytically guaranteed positive answer.

Now, there is a way of understanding this that makes it not a distinctive thesis at all, but just Moorean common sense. The existence of tables is the paradigm, we may say, of an empirically unproblematic assumption. Table-denial is a skeptical hypothesis that would normally be treated as noir [8] The eliminativist has an answer to this: we confuse table-denial with something much sillier, the denial that there is *anything* tablish going on in the places that seem pre-critically to contain tables. The intended hypothesis is that the particles *are* there, and that is the end of the matter; there is not a further thing, the table. It is only the philosopher who insists on some further thing.

But then, as Kripke somewhere observes, skeptics are *always* saying that it is only the philosopher who insists on what is in fact the common sense view. No one but a philosopher, according to Berkeley, would think to insist on *material-object*-type tables. (And a good thing, because they're incoherent.) No one but a philosopher, it has been said, would insist on a genuinely instantaneous sort of instantaneous velocity, as opposed to the limit of average velocities as the interval becomes arbitrarily small. (A good thing, because average velocities are all we have.) Is it only the philosopher who insists on tables, as against tablish manifestations? I take it the answer is NO. Eliminativism may not run as counter to common sense as idealism, perhaps, but it cannot claim to accord with common sense either.

Now, if it counts as a victory for easy ontology that we *see* tables and know thereby of their existence, then the easy ontologist cannot lose; for it is only the skeptic who doubts whether tables are known about by seeing them. The easy ontologist has got to be advocating, in the case of tables,

[8] Skeptic in the Humean sense.

more than just the common sense notion I know that there's a table before me by virtue of having a visual experience to that effect. I mention this so that we can return later to the issue of what the easy ontologist wants that is not obtainable from the Moorean dogmatist.

Returning to the main thread, the easy ontologist imagines us subject to meaning-constitutive usage rules given which "Do tables exist?" has, in the right empirical conditions, an analytically guaranteed positive answer. Next we ask what those rules might be, so as to make it plausible both that

(a) speakers are genuinely bound by them and
(b) table-deniers are flouting them.

The worry is this: the closer a set of rules comes to binding us, the more unlikely it becomes that ontological doubters are flouting them. The rule Thomasson starts with, what I will call the R-schema (after Tarski's T-schema), seems plausible enough:

(R) *N* exists iff '*N*' refers.

Neo-Carnap holds with neo-Frege that the left hand side (*N* exists) is not always epistemically prior to the right ('*N*' refers). The question of *N*'s existence is to be decided, *sometimes*, not in a *habeas corpus* way—by producing the body—but by asking whether '*N*,' if you will, *conducts itself in a referential manner*.[9] One then has to say what referential behavior looks like. The proposal is that

(A) '*N*' refers iff its application-conditions are satisfied,

where, crucially, application-conditions are downward-looking. They concern matters that are or may be settled prior to the determination of whether '*N*' refers or *N* exists.[10]

So, how does one get from (R) and (A) to easy ontology, the view that ontological questions are easy, or easy modulo lower-level empirical questions? Suppose we focus on tables. The pivotal assumptions are these:

1. 'table' has application-conditions
2. these conditions are downward-looking—they don't advert to anything like tables
3. a term's application conditions are constitutive of its meaning[11]
4. the constitutiveness makes it *analytic* that tables are present if they are satisfied
5. the analyticity makes it *trivial* that tables are present if they are satisfied

The assumptions here are, for future reference, REALITY, GROUNDING, CONSTITUTION, ANALYTICITY, TRIVIALITY. I now propose to quarrel with them in various ways, despite sympathizing in many cases with the spirit behind them.

[9]In Finean terms, the burden of (R)'s truth is sometimes borne by '*N*,' not *N*.

[10][Stebbing(1932)] is a fascinating early discussion of downward-looking (she calls it "directional") analysis. Directional analysis is the method of metaphysics in her view; she contrasts it with symbolic analysis which is horizontal and deductive. Easy ontology might be seen as attempting to run them together: "It is with regard to the metaphysical presuppositions [e.g. that tables emerge out of something more fundamental, particles as it might be] that serious difficulties arise. Once these presupposition are explicitly stated..., it becomes clear that they are not logically necessary. These assumptions entail certain consequences with regard to the constitution of the world. It cannot be maintained that the world is certainly so constituted. If it could, then the method of metaphysics might be deductive. But unless the world is so constituted, metaphysical analysisis not possible" (87). This is in the ballpark of my argument in this paper.

[11]'Table' would have to mean something else, if the application conditions were different.

7 Application conditions

How do we tell if a word has downward-looking (in particular, not merely homophonic) application-conditions? It often doesn't, if the test is to ask people who understand the word what those conditions are. But that is *not* the test. Application-conditions are not the kind of thing speakers are expected to have discursive knowledge of; they are not, in the case of basic nouns, articulable even in principle (94). "We should instead think of [application conditions] as

> rules for when it is and is not proper to use a term, which speakers master in acquiring competence with applying and refusing a new term in various situations, and that (once mastered) enable competent speakers to evaluate whether or not the term would properly be applied in a range of actual and hypothetical situations. Although the application conditions for many basic nouns might not be stateable at all, they will be learnable ([Thomasson(2014)], 93)

The crucial move here is the switch from inference rules to language-entry rules. Carnap's rules are *intra*-linguistic; they take the form, more or less, of an argument-schema:

Particles are arranged thusly here.
∴ There is a table here,

N*eo*-Carnapian rules are more like a conditional imperative:[12]

ASSERT THAT TABLES ARE PRESENT
.... should it be that: particles are arranged thusly.

To see the difference, imagine that someone says, *Don't drive if you are too drunk to think straight*. The difference between Carnap and neo-Carnap corresponds to that between

I am too drunk to think straight.
∴ I must not drive.

and

DON'T DRIVE
.... should it be that: you're too drunk to think straight.

To apply the inference rule, I have to be able to *reflect* on the fact that I can't think straight, and reason appropriately from it. This may be difficult if, as the premise says, I can't think straight. To comply with the conditional imperative, it's enough to refrain from driving *when* I can't think straight.[13] This might be arranged by Pavlovian conditioning, or hypnosis, or tying the keys up with a knot you'd have to be sober to undo.

The move to language-entry rules is in one way a huge advance on Carnap. He says himself that "evaluation [of existence-claims] is usually carried out..... as a matter of habit rather than a deliberate, rational procedure..." ([Carnap(1950)], 22). Competence with *Here's a dog* likelier

[12]Better, you should assert it if the question arises, you want to answer correctly, and so on.

[13]And perhaps also to do this under the aspect of *refraining when drun*k, whatever exactly that might mean ([Boghossian(2014)].

consists in counting it true in the right scenarios—ones with doggishly arranged particles—than in inferring *(I should say) there's a dog* from *Here are some doggishly arranged particles*. Why do I say this? One reason is statistical: how many speakers even understand the notion of doggishly arranged particles? Another is the conceptual observation that one doesn't *need* to understand it, or to have heard of particles in the first place, to understand the word 'dog' . Our competence is grounded, in many cases, is the habit or disposition of saying the right thing at the right time. Speech dispositions are checked against usage rules, much as driving behavior is checked against the ban on drunk driving.

But, although language-entry rules are in *that* way an advance on Carnap—they're a step in the direction of greater REALITY— they are also a step backward. The n*eo*-Carnapian as we saw needs application-conditions to be downward-looking, so as to allow for trivial passage to ontological conclusions. One has at least *some* idea of what it means for an *inference* rule to be downward looking. But what is it for a language-entry rule to have these properties? This is crucial, because GROUNDING requires the rule to be

(✓) ASSERT THE EXISTENCE OF TABLES
.....should it be that: particles are arranged thusly.

rather than

(✗) ASSERT THE EXISTENCE OF TABLES
....should it be that: there are tables hereabouts.

A situation with tablishly arranged particles is a situation with tables, according to the easy ontologist; so we cannot test which rule is operative by arranging for (✓)'s contingency clause to be triggered without that of (✗). Given that table and particles are both present, why should it be the particles the speaker is responding to, rather than the table?

Imagine that tablishly arranged particles had a different appearance than tables—a zoomed-in appearance, with the particles individually visible—and speakers acted on the first appearance, and were unmoved the second. That might begin to make a case that the rule was (✓), as the easy ontologist. But the scenarios are, I take it, meant to be perceptually indiscernible. Well, what about a counterfactual setting where they differ? If the rule were (✗), you might argue, then language teachers would warn their students not to be taken in by the mere appearance of particles. And the fact is, let's say, that no such warnings would be issued Would this show that the rule is (✓) rather than (✗)? Not at all. For the particles would still be excellent (conclusive, according to neo-Carnap) evidence that tables are present. Students are encouraged, after all, to say "table" when the facing surface of a table is in view; they are not required to circle it or take a photograph from above. Does this mean that the rule is

(✗!) ASSERT THE EXISTENCE OF TABLES
....should there be the kind of facing surface characteristic of tables.

A simpler hypothesis is that we are encouraged to say "Here is a table," not when a table is *bound* to be present, but when it *is* present. And there *is* a table present when there are tablish particles, or facing surfaces. There is no reason why the correlation should be analytically guaranteed, and in the case of tablish surfaces, it clearly isn't. Tablish surfaces are suggestive of tables, but not analytically sufficient for them. The same goes, quite possibly, for the particles.

I am not asking, how is it so much as *possible* for a speaker to apply "table" on the basis of sub-tabular circumstances. To that the n*eo*-Carnapian has a reply; the application-conditions "*could* be stated in terms that don't appeal to the existence of things" ([Thomasson(2014)], 107). This is true, let's agree. But we need to note a caveat. It is true if "could be" means that there was the possibility in principle of being subject to (✓) rather than (✗). Ontology would in that case have been easy. The question, though, is whether it is easy, which turns on whether we *do* follow (✓) rather than (✗). This is where I feel we are beginning to veer back towards Carnap.

> Showing that the application conditions for 'K' may be stated without appealing to the existence of Ks *demonstrates* that the easy approach is workable for questions about the existence of Ks, but it is not *required* for the easy approach to be workable ([Thomasson(2014)], 108).

This speaks to workability in the counterfactual sense; we *could* have taken a cognitive detour through particles on the way to asserting that tables were present (and then life would have been ontologically easier). Our concern is with workability in an epistemic sense. The neo-Carnapian needs it to be a plausible hypothesis about our actual procedures that we stop short of tables, at some ontologically neutral base camp, to catch our breath before that final, concept-driven ascent. But this is not plausible and not, apparently, Thomasson's view.[14]

How can the actual micro-mechanics of table-talk be so important, you may wonder. It's enough that we could do it in the way suggested with no change in the grounds for table-claims. But the point at issue is whether total grounds factor into empirical and conceptual elements. The neo-Carnapian's grounds are factorizable by design. Seeing, or seeming to see, that a table is there is *not* factorizable.[15] Carnap and neo-Carnap are operating with a picture of linguistic competence that is not inevitable, and does not fit well with the data. I want to sketch a more realistic, though still idealized, Carnap, who does not assume so much in the way of factorizability.

8 Frameworks without factorization

Some cognitive switch is pulled en route from α to ω. So far we have only succeeded in putting a label on it, or rather two labels: α purports to answer an"internal" question while ω addresses an "external" question. What the labels signify is still unclear. It might help to look back at how Carnap introduces the internal/external distinction in the first place, before he decides that internal questions are theoretical ("cognitive") and external questions are practical:

> there are, first, questions of the existence of certain entities ... within the framework; we call them internal questions; and second, questions concerning the existence or reality of the system of entities as a whole, called external questions ([Carnap(1950)])

The idea of standing back from specific numerical questions and pondering the system of numbers as a whole is enormously intuitive. But commentators have had trouble with it, and it seems to play no further role in Carnap's thinking. He *appears* happy to reconstrue seeming concerns

[14]"Though we do not actually start from such terms as 'particles' (or 'plenum stuff') in English, this suggests that there are ways in which application conditions for common-sense terms might be stateable without appealing to the existence of that very kind of thing. Indeed it seems that there are various different ontological descriptions we could use" ([Thomasson(2014)],109)

[15][Yablo(1997)], [Williamson(2006)], [Yablo(2014)].

about the number system, qua system of entities, as "really" concerns about the number system qua system of linguistic rules. That is a pretty dramatic reconstrual! It might have its place in a reconstruction of our ontological thinking, but not in a sympathetic assessment of that thinking.

Why not stick with the distinction as Carnap originally draws it? Sometimes we wonder "about the existence or reality of the system of entities [the number system in this case] as a whole." That is the external question. Other times we take the system for granted and wonder about what specifically is going on in it. To run it the other way around, asking about numbers "within the framework" is asking about them presupposing the system, that is, taking for granted that it exists.[16] Asking about the system of entities as a whole is asking whether the presupposition is correct. Call that the *presuppositional* account of internal/external.

What does the presuppositional account have going for it, beyond that it "feels right"? First, it preserves the part of Carnap's story that worked best, the part about why it is hard to hear *There are numbers* as addressing an internal question. Wondering about the existence of numbers in an internal vein would be wondering whether, on the supposition that there are numbers, there are numbers. (Russell made a lot of the fact that King George V, when he was wondering whether Scott was the author of Waverly, could hardly have been wondering whether Scott was Scott. Someone wondering about the existence of numbers can hardly be wondering whether numbers exist, supposing they exist.) That is my answer to (EAR)—to why, in contrast to *The number of dragons is* 0, we cannot easily hear *There are numbers* as an internal remark.

Presuppositionalism also fixes the parts of Carnap's story that *didn't* work. There is first his answer to (EXT): the part about the external question being practical. The practical question has an easy answer; why then does it strike us as controversial? Asking about the existence of numbers in an external vein is on our view asking (or trying to) the no-holds-barred, nothing-assumed theoretical question that the ontologist always took herself to be asking: granted that we routinely assume that numbers exist, do they really?

There is second Carnap's neglect of (CON)—his failure to explain why the external question should seem philosophically controversial. Show me someone who doubts that we should retain the number framework! Whether numbers really exist, however, as opposed to being assumed to exist, is, on the face of it, controversial in the extreme. That is my answer to (CON). (Answers to (INT) and (EXT) were given two paragraphs back—internal question presuppose the existence of the relevant entities, external ones don't.)

9 Assertion and presupposition

Here then is my thought about Carnap's paradox: the inference seems ampliative because α is heard as presupposing the existence of the number system, whereas ω asserts the existence of the number system. No big surprise if controversy should erupt when a presupposition is dragged against its will into what is asserted or alleged. But there is more to be said on the issue of linguistic plausibility, and it turns out to sharpen the comparison with Carnap and neo-Carnap.

One problem with Carnap's account is the semantic wall it puts up between insiders, operating within the framework, and outsiders wondering if framework rules might be mistaken. There might seem to be a similar problem here. Suppose a platonist says that the distance $D(T)$ a dropped object falls in T seconds is proportional to T^2 (call that S). She takes it for granted that

[16] One can wonder whether a visually presented scene is "real" or just, say, moving images on a screen. But one can also, presuming the scene is real, wonder whether the cat is going to catch the mouse it is chasing.

numbers and functions exist with the expected properties (that P); it is not her job, qua physicist, to pronounce on such matters. The platonist does in fact believes that P, but she is aware that others may not. What is her statement supposed to mean to those unwilling to grant the existence of numbers? (It is not as though she expects it to fall on deaf ears in such cases.)

What's nice about the presuppositional approach is that it subsumes her predicament here under a very general pattern. It's the predicament of anyone who wants to exempt presuppositions from what they are asserting or vouching for or putting forward as true. That is almost everyone, I would think, almost all of the time.

Smith's beer is cold, you say. Have you asserted inter alia that it is beer Smith is drinking? Presumably not— no more than in hoping to find Smith's beer, you are hoping that she has beer to find. The general point is that P does not normally figure in what S asserts, or what is asserted by means of S, if S presupposes P. Here is a simpleminded argument to that effect, drawing on the idea that for P to be implied by $\neg S$ as well as S is the characteristic behavior of a presupposition.[17]

(1) S does not share any assertive content with its negation	...assumption
(2) S does share the implication that P with its negation	...since S presupposes P
(3) This implication is asserted by both of S and $\neg S$, or neither	...(2), lack of a tiebreaker
(4) P is not asserted by both of S and $\neg S$	...by (1)
(5) So P is not asserted by either of them, hence not by S	...by (3) and (4)

Assertive content may be seen, on this picture, as what the full truth-conditional content of S (the sentence uttered)—adds to the presupposed background information P.[18]

Return now to the platonist trying to make herself understood to the nominalist, who does not share her belief in mathematical objects. She is not expressing that belief, or at least not assertively, when she says that $D(T)$ increases with T^2. She is presupposing the objects to convey something about distance fallen, viz. $S{\sim}P$ = whatever it is that S adds to P—say, that the object has fallen four times further after two seconds than one, nine times further after three seconds, and so on. This is the same claim for both of them. And the subtractive format is available to them both, allowing both to access it the same way. Nominalists like this arrangement because that they don't have to believe P, to believe the remainder when it is subtracted from S; not believing P could be the *reason* for subtracting it. Platonists like the fact that you don't have to disbelieve P, either; the reason for subtracting could be that, although true, it doesn't speak to the question at issue.[19]

One needs a model to work with. Here is mine; may others improve upon it. The $\sim$ in $S{\sim}P$ is a logical connective like $\vee$ and &. In logical force it is something like the inverse of conjunction; $S{\sim}P$ conjoined with P is just S again, up to necessary equivalence. (Details in a footnote).[20]

To put it on a more intuitive level, $S{\sim}P$ is the best possible proposition R with which to complete the enthymeme: P, R $\therefore$ S. Or, lest someone think the best R is $P \supset S$, it's the best possible answer to

[17] The thought behind (1) is that denying S (asserting $\neg S$) should not be a way expressing partial agreement with those who assert it.

[18] See [Abbott(2000)]

[19] *Both my feet are cold* presupposes that I have two feet, as indeed I do. Why assume something that I in fact believe? Because the assumption is shared and not at issue.

[20] The coarse-grained proposition expressed by $S{\sim}P$ is defined a follows. It is true in world w iff S "adds truth" (but not falsity) to P in w, and false there if S "adds falsity" (but not truth) to P in w. S adds truth (falsity) to P in w iff $P \supset S$ ($P \supset \neg S$) has a "targeted truthmaker" in w. A targeted truthmaker for $P \supset S$ is a fact obtaining in w that (i) implies $P \supset S$, (ii) is consistent with P, and (iii) makes the best possible use of P. A truthmaker makes best use of P if it minimizes the extent to which $Q \supset S$ is also implied, Q ranging over propositions weaker than P.

what is it about certain P-worlds that make them moreover S-worlds?[21] What distinguishes, for instance, among worlds where two plane figures are the same size, the ones where they're congruent from the ones where they're not congruent? The figures are similar (the same shape) in such worlds. Their being the same shape is the best kind of enthymeme-completer for *They're the same size*, R $\therefore$ *They're congruent*. This qualifies it for the role of what remains when *They are the same size* is subtracted from *They're congruent*.

10 Dividing through

I have been speaking of logical *subtraction*,[22] which makes sense if the "and" of conjunction is likened to the "and" of addition. Conjunction might also be conceived, however, on the model of *multiplication*, in which case ~, qua inverse of &, becomes a kind of *division*. This leads naturally to talk of factorizability and dividing through. (I will go back and forth between these terminologies in a way that is hopefully not too confusing.)

The possibility of dividing through by the Xs (strictly, by the assumption $\exists X$ that they exist) is the key, on my way of thinking, to whether the existence of Xs is a moot question. Why would this be? If we can divide through by Xs, then there is a well-defined X-free proposition R such that S factors into R and $\exists X$. That the Xs are presupposed by S means that S's assertive content is

$S \sim \exists X$,

that is, $(R \,\&\, \exists X) \sim \exists X$,

that is, R.

The part of S that alludes to Xs thus plays no role whatever in determining whether S says something true. But, and here is the key assumption, hypotheses that are powerless to affect truth-value don't themselves *have* truth-value; there is no fact of the matter as to whether they obtain. $\exists X$ is such a hypothesis, so there is no fact of the matter about whether Xs exist.

Wittgenstein says, of a category that it is possible to divide through by, that a member of this category "is not a something, but not a nothing either" — adding somewhat mysteriously that "a nothing would serve just as well as a something about which nothing could be said" (304). Now, of course, there is plenty to say about numbers (never mind his actual target, pains), so what can he be getting at here? Perhaps that numbers are insulated from reality in the way just indicated; the supposition that they exist plays the same role in truth-value determination whether it is true or not. If the Xs play no role in truth-value determination, then "they" are not happily described as existing or not existing; an X is not a something, but not a nothing either.

Suppose that S implies P. P may on the one hand be highly extricable from S; meaning, there is a well-defined proposition R such that S factors neatly into P and R. *Pigs eat cans* is highly extricable from *Pigs and goats eat cans*, because it is clear which worlds satisfy the conjunction, waiving the requirement expressed by its first conjunct: the worlds where goats eat cans. Not only that, *Goats eat cans* is evaluable in its own right, with nary a backward glance at what pigs might be doing. *Tom is red* (Tom's a tomato) is by contrast highly *in*extricable from *Tom is colored*, because it is totally

[21] [Yablo(2014)] has details. The following is *not* a good answer: the feature of certain P-worlds whereby they're S-worlds is that they are either not P-worlds after all, or they are S-worlds. One might as well say that the foxes that are moreover vixens are distinguished by the property of being vixens if foxes.

[22] Which is the usual term ([Jaeger(1973)], [**?**], [Fuhrmann(1999)]).

*un*clear in which worlds the tomato is red but for the requirement of being colored. If an R is insisted on, it will be evaluable only in worlds where Tom is colored; what it asks of worlds where Tom is, say, invisible, our transparent, completely unclear.

These are the two extremes; there is lots in between. P is more or less extricable from S according to how often $S{\sim}P$ is evaluable—which really means, how many $\neg P$-worlds it's defined on, because in P-worlds it's just a question of whether S is true as well. To put it in terms of factorization, the more worlds $S{\sim}P$ is defined on, the more factorizable S is into P and "the rest." *Pigs and goats eat cans* is highly factorizable into *Pigs eat cans* and "the rest," because the rest is $S{\sim}P$ = *Goats eat cans*, which is defined on all worlds. *Tom is red* is not factorizable into *Tom is colored* and "the rest," because the rest should be *weaker* than *Tom is red*, and this particular remainder is not, being true only in world where Tom is red (it is false where Tom is a different color than red, and undefined in worlds where it lacks color altogether). The claim quite generally is that

CLAIM: *Whether or not P* is a moot question iff
(a) P is ordinarily presupposed, not asserted, and
(b) P is highly extricable from the sentences S that presuppose it

The mootness of ontological questions is just the special case of this where P is an existence-claim. It is here that we speak of "dividing through by the objects"[23] The mootness of "Does the number system exist?" turns on whether we can divide through by numbers. What this divisibility ultimately comes to in numberless worlds w is that exactly one of $N \supset S$, $N \supset \neg S$, has a targeted truthmaker in w; a fact obtains that is compatible with the existence of numbers and decides S's truth-value on the assumption of numbers. I find this pretty plausible .

11 Numbers and tables

Dividing through by tables is far more difficult, it seems to me, than dividing through by numbers. *D(T) is proportional to* T^2 is more easily relieved of its numerical presuppositions than *There are tables here* is relieved of....what? This is part of the problem—what does *There are tables* presuppose that we might try to strip away. Not the existence of tables, for tables are not presupposed by this statement, anyway it's not clear what is left if *There are tables here* is stripped of its implication that there are tables somewhere or other. Is the presupposition that there are tables, given a certain hypothesis about the sub-tabular order of things? The task then becomes to identify that hypothesis.

This brings us to one of the key issues between me and Eo-Carnap. Easy ontology is supposed to hold equally for numbers and tables; quizzicalism is not, because table-talk has no clear import for lower levels of reality. Eo-Carnap thinks we can work around these reasons to obtain an ontologically innocent assertive content for talk of macro-objects. Let it be that statements about tables and chairs don't have microparticles or tablish arrangements in their assertive content, the way *There are more chairs than tables* has tables and chairs in its. That just shows that van Inwagen misidentified the assertive content. The tablishness can be eliminated by a device of Trenton Merricks':

> (a) Atoms are arranged statuewise if and only if they both have the properties and also stand in the relations to microscopica upon which, if statues existed, those atoms' composing a statue would non-trivially supervene ([Merricks(2003)], 6)

[23]On dividing through, see [Lear(1977)] and [Reck(1997)].

But this still leaves the microscopica. For these Thomasson suggests we employ feature-placing language along the lines suggested in [O'Leary-Hawthorne and Cortens(1995)] :

(b) It is statuing here if and only if circumstances are such that, if statues existed, it would be true that there is a statue here.

Note the conditional on the right hand side of (b). Conditionals of this type, with the consequent entailing the antecedent, have been used to explicate remainder-hood: $A{\sim}B$ is true, it is said, just if $B \Rightarrow A$ is true, for some appropriate conditional $\Rightarrow$.

Let's first try reading $\Rightarrow$ counterfactually. *Pigs and goats eat cans* ~ *Pigs eat cans* ought to be true in exactly the worlds where goats eat cans. The counterfactual *Pigs eat cans* $\Box\!\!\rightarrow$ *Pigs and goats eat cans*, however, holds as well in worlds where goats *don't* eat cans, but would if pigs did. And it fails in worlds where .goats do eat cans, but wouldn't if pigs did. The proposed account of statuing has the same problem. An empty room might have a sign on the door reading STATUES IF ANY IN HERE, PLEASE. It would contain a statue if statues existed; but no statuing occurs in empty rooms ([Yablo(2006)]). To address this, we might holding certain aspects of the situation (e.g. that the room is empty) fixed:

(c) It is statuing here if and only if circumstances C obtain such that, if statues existed & C, it would be true that there was a statue here.

But, circumstances like that obtain in every world; it holds in the empty world, for instance, that *Statues exist* $\supset$ *there is a statue in such and such a place*, just because the antecedent is false. Holding that conditional fixed, there would indeed be a statue here if statues existed. Evidently the circumstances have to be of the right sort. But what are the right sort of circumstances, once we get past the usual suspects: suitably arranged particles, and the like? Maybe we mean, circumstance in virtue of which a statue would exist, if there were statues.

(d) It is statuing around here if and only if circumstances C obtain such that, if statues existed & C, there would be a statue here in virtue of C.

Again there are problems. Do we mean partly in virtue of, or wholly in virtue of? If the first, then it statues in a room with five microparticles, provided they would be supplemented with a bunch of additional particles, if statues existed; it would be *partly* in virtue of those five microparticles that the room had a statue in it. Alternatively it might be statuing here if conditions obtain such that a statue would exist *wholly* in virtue of them, if statues existed. But this, given the principle that X does not hold *wholly* in virtue of Y, if Y is possible without X, means that statues do exist here, which the lower-level conditions are not supposed to imply directly, but only supplemented with a hypothesis about the meaning of 'statue.' What the easy ontologist is really after, I suspect, is something like the following:

(e) It is statuing here if and only if there is a statue here, waiving requirements dreamt of only by metaphysicians.

I will write $*statue*$ for the "cash value" in lower-level terms of statues. $*Statues*$ resemble statues except in having nothing metaphysically contentious about them. The thought would be (close enough) that $*statues*$ analytically suffice for the existence of statues. Metaphysical reservations are spurious as a matter of meaning.[24]

[24] This already may give us pause. Since when do ordinary meanings take guard against esoteric metaphysical objections?

This tells us only what the easy ontologist *wants* from \$*statues*\$. We learn the place that statuing is to be positioned, but not that the position is occupied, or by what.

One problem is that philosophers disagree about which sorts of conditions are commonsensical and which were invented by metaphysicians. They differ too about where to draw the line between world-hypotheses that, so to speak, give common sense everything it wanted, and those in line with its nonnegotiable demands ([Chalmers(2006a)]). Berkeley sees \$*statues*\$ where God is having certain ideas. He is wrong about that, we think; the gap between ideas and statues is not a philosopher's fiction. But how is this sort of question to be decided in general? I would not want to be the one who sifts through the proposed reductions to determine which run counter to common sense. A good part of philosophy consists of squabbling about precisely this—about which hypotheses are revisionary/eliiminative and which the ordinary speaker will, or ought to, take in stride.[25]

Also though, and this is the other problem, even if the metaphysical aspects of a hypothesis could be identified, who is to say that anything useful is left when they are whittled away? Let the "royalist" component of a statement be the bit if any attributing a king to France. Let its "republican" aspect be what remains when we cancel out the royalist component. For the royalist component of *The King of France is wise* to be clearly labeled helps us articulate the republican component only insofar as we now know what to subtract. It doesn't guarantee us an evaluable remainder. There is no sensible question of whether the King of France was wise, ignoring the bit about France having a king. Eo-Carnap of course agrees with this when it comes to \$*tables*\$ and tables. She needs there to be at least a notional distinction, though, in order to state her position, which is that \$*tables*\$ analytically suffice for tables.

Isn't it clear, though, that *There's a table here* is true, bracketing its putatively metaphysical aspects? If the remainder is *true*, surely it must *exist* in the form of some particular proposition. This in fact doesn't follow. *There is a table here* is true after all as it is, even with nothing subtracted. Subtraction can only make it weaker; whatever is weaker than a truth is true itself. A proposition doesn't have to be identified for us to know it is true, if a truth is known to imply it.

I agree, of course, that there is a temptation, very hard to shake, to think that if X is stronger than Y, there must be some R which makes up the difference. One feels there *must* be such a thing as what knowing that goats eat cans adds to its being true that they do, or believing water to be plentiful adds to the existence of water. If X doesn't add anything to Y, we are apt to think, then it adds *nothing* to Y, in which case the two are equivalent. The situation is especially delicate for the easy ontologist, who believes that *There's a table here* truly *is* equivalent to \$*There's a table here*\$, its de-ontologized counterpart. The *truth* of her position requires that X be equivalent to \$$X$\$, while the *interest* of her position demands that X appear to involve more than \$$X$\$, and that an R can be identified which sums up the apparent difference.

12 Constitutive rules

The neo-Carnapian position regarding tables, as I am understanding it, rests on five interlocking assumptions, laid out in section **6**:

REALITY 'table' has application-conditions
GROUNDING these conditions are downward-looking—they don't advert to anything like tables

[25] See, for instance, [Hawthorne and Michael(1996)], [Stroud(2000)], and [Chalmers(2006b)].

CONSTITUTION a term's application conditions are constitutive of its meaning[26]
ANALYTICITY the constitutiveness makes it *analytic* that tables are present if they are satisfied
TRIVIALITY the analyticity makes it *trivial* that tables are present if they are satisfied

So far the focus has been on REALITY and GROUNDING. Agreeing that neo-Carnap had made an advance on Carnap where REALITY was concerned, we argued that usage rules, especially of the language-entry variety, are hard to reconcile with GROUNDING; it is not clear what downward-lookingness even means with a language-entry rule. Inference rules do better with GROUNDING, but worse with REALITY. Let's now move on CONSTITUTION: a term's application conditions are constitutive of its meaning.

The idea of meaning as constituted by usage rules is familiar from conceptual role semantics; the particular form of CRS which has use governed in part by language-entry and -exit rules is *long-arm* conceptual role semantics ([Greenberg and Harman(2007)]). An early advocate was Wilfrid Sellars. If we use "transitions" (following Sellars) as a general term for habits of inference and language-entry and -exit dispositions, then the principal challenge CRS faces is this: which transitions are governed by meaning rules and which are merely empirical? The problem looks especially serious for long-arm CRS, because judging of a presented scene that it contains a table looks like an empirical exercise rather than one mandated or proscribed by meaning rules. [27] As Thomasson says, "rules for when it is and is not proper to use a term" are not automatically analytic. Learning the use of "table" is all caught up with learning what tables look like, where they're typically found, and so on.

Eo-Carnap seems nonchalant about this. Application-conditions, she says, are not merely conditions "under which we would have *evidence* that the term applies, but rather conditions under which the term *correctly* applies" ([Thomasson(2014)], 93).[28] She is right, of course, that merely epistemic reasons to apply K do not suffice for the existence of Ks; the application has got to be correct. The problem is to see how this separation—between rules of evidence and correctness rules— is to be carried out in practice.[29]

An initial hindrance to neatly dividing them is that there is nothing to prevent evidential rules from figuring in meanings; this is a recurrent theme among friends of meaning as use or conceptual role.[30] Even if (✓) can be made out to be meaning-constitutive, then, that still may not give us easy knowledge of tables. Perhaps suitably arranged particles are necessarily *evidence* for tables. (Just as some philosophers maintain that perceptual appearances are necessarily evidence for their content.) The easy ontologist needs (✓) *construed as definitive* to be constitutive of the meaning. Meaning rules that certify language-entry conditions as *favorable* to the emergence of tables, even *canonically* favorable, are not enough. One clue might be the way a rule is initially taught.

[26] 'Table' would have to mean something else, if the application conditions were different.

[27] "Looks like" in deference to a possibility noted by Wittgenstein: "the fluctuation in grammar between criteria and symptoms," which "*makes it look as if* there were nothing at all but symptoms" ([Wittgenstein(1958)], book I, paragraph 354. italics added). Criteria are defeasible rules of evidence which nevertheless belong to the meaning. Even when we only seem to get caught in a rainstorm, "the fact that the false appearance is precisely one of rain is founded on a definition."

[28] Adding that "not much more needs to said here" (93).

[29] Harman makes this kind of point in a discussion of Sellars: "Sometimes he speaks of semantic rules as if they were principles of the theory of truth. At other times he speaks of them as if they were principles of the theory of evidence.The puzzle is whether he has confused two different sorts of principle or has rather found a way to exploit certain connections between the two sorts of principle. I think he has tried to do the latter; but I am not convinced that he has succeeded" ([Harman(1970)], 410).

[30] [Baker(1974)], [Sellars(1954)], [Field(1977)].

> we teach our children words ... by simply demonstratively applying 'dog' in some situations and refusing it in others, and applauding or correcting their attempted uses of phrases like '[there is a] dog' in various situations. ([Thomasson(2014)], 93)

If such and such is presented to Zina as the very paradigm of a dog-involving situation, doesn't she *have* to accept it as authentic, on pain of not understanding the word? To come at it from the other direction, I ought to have mentioned it, if the rule has wiggle room—if, depending on the deep metaphysics of the matter, even the best examples might not be genuine. This sounds like the paradigm case argument, which ought to worry us. I don't warn Zina either, after all, not to be taken in by robot dogs or dog facades. "This is just what we *call* a dog," I may say. Skepticism cannot be refuted to easily, surely.[31] Eliminativism and nihilism can't either.

I can think of two reasons we might have for not raising metaphysical flags about macro-objects. One, advocated by the easy ontologist, is that Zina is not running any metaphysical risks. Another is that she is not running any *serious* risks. Evidence that table-denial is incoherent, as opposed just to far-fetched, might be hard to come by.[32]

Consider an evaluative term like 'sneaky,' or 'yucky,' or 'not fair.' These no less than 'table' are taught by paradigms, foils, applause, and correction. Do we appeal to paradigms because the lower level conditions are unstateable, or unknowable? Lower-level conditions aren't to be expected with terms such as these. This is, first, because fairness is a normative notion, and an *ought* is not derivable from an *is*; and, second, because some such terms have e phenomenal component, and *how it feels* is similarly underivable. Tables are not immune from these considerations. What distinguishes a table from an altar or check-out counter is partly normative—how they are supposed to be used— and what distinguishes it from a swamp-table involves the mental states of of table-makers and -users.

What is the child learning, then? How to *recognize* tables (so-called), presumably. Recognizing a table seems, again, like an *empirical* achievement. You know that there's a table here, because you see it. It might be replied that recognizing a table is *easy*; and so it is, but not in the relevant sense. The easy perceptual availability of tables is a Moorean fact—everyone grants it but skeptics, be they Cartesian or metaphysical. The easy ontologist is not going to be content with that, since that makes her position undistinctive. She ought to deny, so it seems, that I know a table is there merely by seeing it. I see rather something more basic (tabling), from which the table's existence follows. (Again, if direct perceptual knowledge is acceptable to all sides, then there's nothing to disagree about.)

Consider a still more basic category— that of *object* as understood in cognitive psychology. Some might think that "infants apply the *object* concept by seeing that there is an object there, and that the application conditions for their concept require that there be an object there" ([Thomasson(2014)], 111) This would be a mistake, however. "The more proper way to understand the application conditions for this basic object concept (applied using their perceptual input analyzers) is in terms of the perceptual input that leads them to apply the concept. That does not appeal to prior criteria about whether an object exists" ([Thomasson(2014)], 113).

But, if ever there was something only evidentially relevant to the existence of material objects, perceptual inputs are it. Conditions on perceptual input cannot, we normally think, ensure the

[31] [Watkins(1957)].

[32] Table-denial could still fall afoul of constitutive rules. "Constitutiveness might be motivated by mere obviousness: some empirical truths might be so obvious that, someone's giving them up would always be better explained by the hypothesis that their meaning has changed than by the hypothesis that they are now, mysteriously enough, believed false....constitutiveness neither entails analyticity, nor is exclusively explainable by it" ([Boghossian(1994)], 120)

existence of material macro-objects outside the head. Is this to say that infants aren't "right" to make the perceptual judgments suggested by their perceptual input analyzers?

> The objector cannot be coherently suggesting that, given the rules for identifying and individuating objects (that delineate our basic object concept), the infant gets it wrong. At best, the objector can be suggesting that we should replace this basic object concept of core cognition with some other concept suitable for doing grown-up ontology ([Thomasson(2014)], 112)

But the objector is not suggesting that the infant has latched on to wrong rule, or even that her judgments are mistaken. Baby usually gets it right; maybe she always gets it right. That's just our instinctive anti-skeptism talking. But she could *in principle* get it wrong; for she could be stuck in a vat or watching a home movie. The best rule is not necessarily good enough.

13 Analytic sufficiency

I have been suggesting that correctness conditions might not be so easy to peel off from plausibility conditions, and that downward-looking conditions might not be so easy to distinguish from homophonic ones. This is a problem if the argument requires application conditions to be downward-looking but not evidential. Thomasson wonders about this herself. "Why think that our terms *have* application conditions, so conceived?" ([Thomasson(2014)], 95). The idea that referents are semantically required to be thus and so has fallen into disfavor, of course, with the advent of referential semantics. These kinds of requirements are unavoidable, though, Thomasson argues, if we are to address certain *problems* for referential semantics, notably the *qua* problem.

I want to assign my best canine friend a name. There are any number of candidate referents where I'm pointing, so I need to specify that it's a *dog* that "Sparky" is meant to stand for, as opposed, say, to a pile of dog-parts or mass of canine matter. But then, "Sparky," given that it is meaningful, cannot help but refer to a dog; in the material mode, Sparky as a matter of meaning must be a dog.

Note a subtle equivocation here. Conditions of meaningfulness are one thing, however, conditions imposed by the meaning another. The confusion is natural because both dependencies can be formulated in the same words:

necessarily, "Sparky" refers to x only if x is dog

One can't tell from this formulation what it is that is being characterized as contingent on the referent being a dog. There is first the metasemantic circumstance of the name coming to refer to Sparky, as opposed to remaining meaningless or referring to some other thing. It's that metasemantic outcome that, to go by the qua-problem, depends on the referent being a dog There is second the *semantic* fact of the assigned meaning's being true of x, as opposed to false of x. This is what the easy ontologist wants to depend on x being a dog.

Suppose for argument's sake that it makes "Everest is a mountain" analytic, that mountainhood figures in how the referent was singled out. Also crucial to how it was singled out is that it be the right mountain, the mountain demonstrated on that occasion. If "Everest is a mountain" gets to be analytic thanks to the role of mountainhood in identifying the referent, shouldn't "Everest has at least once been pointed at" be analytic, by the same reasoning? Alternatively Everest might be distinguished from other mountains by the fact that it is taller than them. This does not make it analytic, or epistemically guaranteed, that Everest is tallest. We might discover, even if Everest was introduced that way, that K2 is taller; we would have realized but for a triangulation error. Clarification requires that we attend to the right object; whether the description used to get us to do that really applies is a further question. Paul Boghossian makes essentially this point in ([Boghossian(1994)], 119):

> If I say that holding true the sentence 'All dogs are animals' is constitutive of 'dog"s meaning dog, then I am saying that it is necessary for 'dog' to mean dog that that sentence be held true. And If I say that that sentence's being held true is necessary for the expression to mean what it does, then I am saying that the expression's meaning what it does is sufficient for the sentence's being held true - i.e., that it is analytic. The fallacy ....occurs in the very last step....there is all the difference in the world between saying that a certain sentence must be held true, if it is to mean this, that or the other, and saying that it is true

A second question arises even if the qua argument goes through, making it analytic that Everest is a mountain. This gives us a *necessary* condition on the applicability of "Everest"; there had better be a mountain out there. The easy ontologist postulates a *sufficient* condition: if there are mountainously arranged particles (or whatever) out there, then the applicability conditions for "Everest" are fulfilled. There might indeed be some other aspect of the qua-problem that argues for sufficient conditions, not just necessary. If we need necessary application-conditions to force the number of referents down to one, perhaps sufficient ones are needed to bring it up from zero?

But bringing it up from zero can be accomplished much more easily, just by assuming that there is *in fact* a mountain, in the places where the easy ontologist says there must be. Also, as we saw, reference-fixing conditions needn't hold analytically. They argue at most that there *is* a mountain there, barring outrages of nature and ignoring metaphysical allegations. So, on the one hand I question whether *qua*-considerations get us even to analytically necessary conditions. And on the other I seem to see a problem getting the analytic *sufficiency* conditions needed to make ontology easy.

14 Triviality without analyticity?

The paradigm-case aspect of the neo-Carnapian argument for tables finds an echo in Crispin Wright's neo-Fregean argument for the existence of numbers. Wright does not maintain that *The number of Fs = the number of Gs* follows *logically*, or even *analytically*, from *There are exactly as many Fs as Gs*. He maintains that the biconditional linking these two figures in the *canonical explanation* of the concept of number. Maybe some of us don't have the concept, or don't want it. We that do have it, though, cannot question the existence of numbers (as guaranteed by the biconditional) without abandoning the explanation we have been given of it, and so renouncing our claim to understand number-statements in the first place.

> the suggestion that a finitely instantiated concept might lack a number is ... in conflict with the form of explanation which abstract sortal concepts of this family receive, together with the reflexivity of the relations of the relevant definientia. Hence the sense of incoherence which such suggestions inspire in us: for the suggestions sound

like expressions of scepticism; and no such scepticism requiring recourse to the relevant concepts for its very formulation can be anything but incoherent ([Wright(1983)], 151-2)

Thomasson might similarly maintain that, since we acquired the concept of table by being presented with various exemplary instances, we cannot withhold it in tablish circumstances while still maintaining that we were taught it properly in the first place.

A prima facie problem with this, as Field points out in connection wIth Wright, is that the concept of God, or at least a well-known such concept, has a canonical explanation, too.[33] We get our God-concept by way of an Augustinian theory that credits God with omnipotence, omniscience, and goodness. Such a theory cannot be true unless God exists; so we understand what "God" means only if God exists.

Field responds to this in the standard way: the theory, to confer understanding, does not not have to be true; it tells us what God is *supposed* to be like, what he is like if he exists. Hume's Principle likewise tells us what numbers are supposed to be like—what they are like if there are any. Children are taught to use "dog" in thus and such circumstances here, if anywhere. They learn thereby what dogs are supposed to be like. They don't *say*, "if there are any." But that is because, to echo an observation of Quine's, *dogs clearly exist*. It never occurs to us to doubt it.[34] And we should *not* doubt it.

This doesn't cut much ice against the nihilist, however, for he already *knew* his thesis was counterintuitive; he thinks he can overcome our doubts with clever arguments. One can't assume in an argument with the metaphysician that far-fetched positions are false. Or rather, if one *does* assume this, the argument shouldn't be billed as merely drawing out unnoticed consequences of the concept of table, or number. Field quotes a telling passage from Wright:

> when it has been established, by the sort of syntactic criteria sketched, that a given class of terms are functioning as singular terms, and *when it has been verified that certain appropriate sentences containing them are, by ordinary criteria, true*, then it follows that those terms do genuinely refer [my italics]. ([Wright(1983)], 14)

"The kicker here," he comments, "is the phrase 'by ordinary criteria': if it were omitted, we would have [an assumption insufficient for Platonism]. I propose that the [the assumption Wright needs] is given by the sentence quoted, with the italicized phrase taken very seriously: What is true according to ordinary criteria really is true; any doubts that this is so are vacuous" ([Field(1984)], 546).

I sense a similar assumption in Thomasson. What more could you want? she asks the nihilist. You aren't able to articulate a single further requirement on tablehood, yet you still insist that what we have is insufficient. Every parent feels the force of this. How can you not like the pasta? When you can't even tell me a single thing you don't like about it, a single thing that could be better?[35] And every child knows the answer. "I can't tell you why not. I just don't." Likewise there is no rule that says tables have to exist, if they cannot tell you why they are holding out.[36]

[33] [Field(1984)]

[34] Even if the abstract possibility of doubt does occur to them, to raise it in the very explanation of *dog* might well put the student onto the wrong concept.

[35] Wright notes in a similar vein that it is hard think what conditions more favorable for the emergence of numbers there could be.

[36] A word about Thomasson's reply to a worry raised elsewhere. The worry was that neo-Carnapianism, by writing so much into the meaning, erects implausible barriers to communication. Granting that her idiolect has the ontology-

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simplifying features she lays out, perhaps other idiolects are organized differently. . She gives examples to show that "we can indeed generally communicate (or play) together despite variations in the rules [we] are, or think [we] are, answerable to." I found this pretty convincing! I wonder, though, if additional premises will now be needed to argue "from her own case" that ontology is easy for everyone. Be that as it may, suppose we concede to Thomasson that we speak the language that she describes. Haven't we seen at least that there are neighboring *possible* languages that function differently, but are hard in practice to distinguish from our own? "Numbers exist" might be true in English, but false in a variant of English that we might be speaking for all we know. Then the conditions are in place for a Williamsonian argument that it is hard to know whether numbers exist, and thus indeterminate whether they exist.

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